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Final Report

Sri Lanka: Training for ACI Qualifications - Assessment of Needs and Action Plan

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FORWARD

Acknowledgements

This report was written based on the Advisory Team's visit to Sri Lanka from March 22, 2004 to March 31, 2004.

We would like to acknowledge and thank all the numerous individuals, institutions and agencies who kindly met with us and provided us with the information and data to produce this report.

In the context of this evaluation visit, special recognition goes to Ashan Dassanayake and Manohari Gunawardena, respectively President and Secretary of the Sri Lanka Forex Association who played a major role in organizing meetings and generally facilitating the project.

Members of the SLFA Executive Committee also made valuable contributions to the formulation of the Action Plan and Budgets.

In a conscious coordination effort, the Needs Analysis project was scheduled in Colombo to coincide with the inaugural training program established to prepare Sri Lankan foreign exchange traders to sit the Association Cambiste Internationale - The Financial Markets Association (ACI) Dealing Certificate examination.

This highly convenient timing allowed for incorporation of feedback from members of the program into the Needs Analysis. As result, all 21 course members - and the course leader - Mervyn King of JJ Associates - offered extremely valuable input.

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EXECUTIVE SUMMARY

Before detailing specific conclusions and recommendations, it is appropriate to make a number of general observations:

- The Sri Lanka Forex Association (SLFA) has been advocating adoption of formal training programs for several years but it is only in recent months that this concept has generated real momentum. The current project was effectively underwritten by a joint effort between the SLFA and the Central Bank of Sri Lanka (CBSL).
- Research with ACI staff suggest that their examinations are beginning to play a significant role in assisting individual emerging markets plan a medium term development strategy around a formal training concept. Thus the initiative of the SLFA and the SLCB to introduce this concept into the Sri Lanka foreign exchange market is not unique.
- The specific rationales underpinning this effort include (1) Sri Lanka's relative late start in the worldwide foreign exchange market (2) a strongly cooperative spirit among different market participants – as evidenced by the very visible role of the SLFA and the central bank and (3) a strong local commitment to professional education.
- As the local interview program and trader survey got underway it was quickly apparent that support for the SLFA effort to build a program of ACI training in the country was unanimously supported by the full range of public institutions, corporations and banks.
- A summary listing of the 37 interview respondents is quoted in Appendix 2 while the list of the companies supplying attendees at the inaugural ACI Dealership Certificate program held at the Galadari Hotel, Colombo on March 22 – 26, 2004 is attached at Appendix 3.
- Although the foreign exchange market in Sri Lanka is limited in volume, there are clear indications that it is poised for significant expansion in coming years. Apart from traditional spot and forward trading, several banks noted that they were currently involved in options and derivatives trading and were actively promoting such instruments with their local customers.
- It should also be understood that interest in treasury services is at a very high level at this point as most banks and money brokers have seen outstanding profits from their treasury areas in the past year. While a portion of these profits have come from foreign exchange trading, the bulk are derived from portfolios of local government bonds which have benefited from a 500 basis point drop in interest rates in the past year.
- Interest in the ACI Examination schedule was not limited to traders and operations personnel in foreign exchange and money markets. A number of senior bankers expressed an interest in having their credit officers take part as did some major corporate players. These firms also stressed that they would be expanding their market participation in coming months and would rely on the banking sector for technical leadership in financial instruments.
- Currently the SLFA is handling all the administrative aspects of the examination program. For the immediate future, it is appropriate for the SLFA to remain in charge of organizing and administering any foreign exchange training program. This group is highly motivated to maintain momentum and clearly has the broad support of the Sri Lanka Central Bank. While other professional organizations – for example the Institute of Bankers or the ACCA – have some interest in the ACI program, this does not suggest that they would wish to take significant responsibility for a project which is out of their major line of development.
- As our pro-forma Budget in section 8 suggests, we believe that outside funding should be maintained so long as overseas course leadership is required. However, as soon as 2005, we anticipate a phased hand over to local course leadership and – at that time – it will be appropriate to rely on local funding for all aspects of the program.

As will be frequently noted in this report, all of the organizations and individuals interviewed in the course of the onsite research program expressed 100% support for the establishment and maintenance of this foreign exchange (and money markets) training program.

The five quotes presented below represent only a sample of similar sentiments expressed during the interview program.

- "What we need in this market at the moment is human skills," Mr. K.G.D.D. Dheerasinghe, Superintendent/Registrar, Central Bank of Sri Lanka.
- "This type of training is required to improve the technical knowledge of our market participants," Mr. S. Palihawadana, Assistant General Manager, Seylan Bank (course member with seventeen years trading experience.
- Summing up the official view of the Sri Lanka Central Bank, the Governor, Mr. Amarananda S. Jayawardena said, "We need a lot of training for forex – we want good markets."
- " It's a great idea," Mr. Hemaka Amarasuria, Chairman Singer Sri Lanka Group.
- Quoted in the local newspaper, Financial Times on Sunday, Mr. Senerath Seneviratne of Hong Kong Shanghai Banking Corporation said," Knowledge within the financial sector is not good enough. We need proper risk management systems in place. We need knowledge of financial products at very high levels in organizations such as senior management". He concluded, "The market will not go anywhere if we don't make sure customers understand the products."

CONCLUSIONS AND RECOMMENDATIONS

- Both locally conducted interviews with major institutions in the foreign exchange and money markets sector - and individual feedback from the 21 course attendees – dispel any concerns that the Sri Lanka market is not ready for a major effort in professional training. At no time did any respondent agree with the suggestion that the ACI training programs might be too sophisticated for the current and future needs of the Sri Lanka market. Rather it was generally believed that implementation of this training concept was overdue and should provide a significant stimulus to the diversification of the market both in terms of products and participants.
- Detailed interviews carried out with banks, corporations and the central bank confirm that demand for these training programs can be expected to run at 20 – 40 per year for the Dealing Certificate and up to 20 per year for the Diploma. Additionally, there were frequent suggestions that the ACI Settlements course – and other back-office and operations courses - would be warmly welcomed by the financial community.
- Pro forma budgets for the upcoming three year period suggest that external financing need only be made available when it is necessary to bring a highly-qualified course tutor from the UK or other overseas location. Our Action Plan suggests that this will be called for only for the first three years.
- Given the existing pool of experienced foreign exchange traders who are now in the process of gaining the ACI Certificate, it is reasonable to conclude that skilled local professionals will quickly be available to deliver the Certificate training program to future generations on foreign exchange market recruits. It was frequently pointed out that other comparable professional certificates were entirely handled by Sri Lankans.
- While there is no obligation for a trainer to hold the more advanced Diploma qualification, this is obviously desirable and we suggest that an inaugural Diploma program – possibly led by JJ Associates – should be tabled for early 2005. This would suggest that Certificate Training Courses scheduled after mid-2005, should be fully run by Sri Lankan staff.
- Once the Dealing Certificate program is staffed by a Sri Lankan course leader, there will be no particular constraint on offering as many programs as the market can absorb. All costs would be met through local fee income.
- As noted in Section 8, some members of the Executive Committee of the SLFA argued strongly that a Diploma course and examinations should be brought forward to the final quarter of this year in order to tap into the solid

enthusiasm now being shown.

- The initial ACI Certificate program held in the week of March 22, 2004, has been extremely successful from all points of view. In the view of Mervyn King, the attendees were of outstanding professional quality and were fully able to handle the ACI syllabus. It is expected that most will take - and pass – the ACI Dealing Certificate examination in coming weeks.
- In line with experience in other trading markets – and in response to frequently voiced opinion in the money market and corporate sectors - it is recommended that every effort be made to widen the appeal of the foreign exchange association by bringing members from all areas of the Sri Lanka financial community.

ORGANIZATION OF REPORT

This report is organized into 9 sections as follows:

1) Introduction

2) Approach

3) Outline of the Foreign Exchange Market

4) ACI Examinations

5) Initial Training Session in Sri Lanka

6) Case Studies of Training Role

7) Plan of Action

8) Financial Assessment and Pro Forma Budget

9) Appendices

1. INTRODUCTION

This report presents the findings and recommendations from Sri Lanka Foreign Exchange Training Needs Assessment Consulting Request Number, CNTR IRDA.F.11 C52, awarded by the FIRST Initiative in February 2004.

Broadly, the objectives of this assessment have been to:

- Assess the market situation in Sri Lanka and its current and future needs for forex training.
- Assess the capacity of Sri Lanka's forex market participants and institutions to deliver the training necessary for market development.
- Develop and cost a plan to meet Sri Lanka's forex training needs.

Appendix 1 presents the original Terms of Reference from FIRST Initiative in London for both the ACI Dealership Certificate course and the Training Needs Assessment component of this project.

The recommendations in this report aim to promote best practices and principles as framed by recognized international organizations. However, it was also the aim of the Advisory Team to ensure the recommendations were practical and useful for the current environment of the foreign exchange and money markets in Sri Lanka.

2. APPROACH

The research program undertaken in Sri Lanka and Europe had three key goals:

- Review the worldwide penetration of the ACI foreign exchange training and examination concept and assess the scope and value of the course content in the Sri Lankan context.
- Assess local Sri Lankan readiness and demand for a structured training approach.
- Assess support for this approach from local traders and senior financial managements
- Evaluate training options with a focus on cost control and early transfer to local operation.

It was emphasized in the Terms of Reference that - prior to the completion of the research visit to Sri Lanka - a presentation of the initial findings and preliminary conclusions should be given to local interested parties to ensure their "buy-in". In keeping with this directive PowerPoint presentation of the key elements of the report was given to a specially convened meeting of the SLFA Executive Committee on March 30. As confirmed by all present, the findings were very well received and the key conclusions approved by the members present.

During the evaluation visit interviews were conducted with approximately 40 members of the Sri Lanka financial community, including representatives of all the professional bodies interested in the future of foreign exchange training.

Appendix 2 lists the individuals interviewed during the research phase of this Needs Assessment, while Appendix 3 lists the local institutions sending participants to the ACI training course held at the Galadari Hotel, Colombo, March 22-26, 2004.

3. OUTLINE OF THE SRI LANKA FOREIGN EXCHANGE MARKET

Sri Lanka has an active but relatively modest foreign exchange market focused largely on Sri Lanka rupee/US dollar trading. Trading volumes are modest with daily turnover estimated at $30 million per day. However, a number of banks are expanding their market involvement into cross-currency and derivatives trading and it is generally believed in the market that this growth and diversification trend will continue.

The foreign exchange and money markets sector comprises 26 commercial banks and 7 money brokers. Since the floating of the Sri Lanka rupee in January 2001, dealing in foreign exchange is limited to licensed commercial banks. The central bank is very active in sponsoring the development of capital markets activity in the country and has been a prime mover behind this – and other - training initiatives.

There is wide sense that capital markets trading is, and will continue to be, a key source of banking and financial sector income. It was repeatedly stressed that – in the past year at least -t Treasury income is the biggest single contributor to overall bank income. It is estimated that there are about 300 capital markets traders, of whom 165 are members of the SLFA. Local traders expect that the central bank's current restrictions on the types of currency trading permitted will be subject to additional relaxation in coming months and trading opportunities will increase as a result.

As indicated by individual CVs and the results of the questionnaire distributed to all course attendees, the foreign exchange trading community is highly experienced – with average time in the business exceeding 7 years. However, there is also a deep sense that technical skills are lacking and that formal training efforts need to be increased. This view was evident at institutions as diverse as the central bank, commercial banks and corporations.

It should be noted also that interest in the ACI Certificate and Diploma extended beyond the foreign exchange sector with the President of the Money Brokers Association suggesting that his members would be interested in joining the program – possibly supplemented with a brief pre-course foreign exchange familiarity session.

Finally, it is worthwhile pointing out that while a few financial sector specialists do leave to work overseas, this is not generally seen as a major concern and local specialists do not anticipate any substantial exodus of foreign exchange traders even following the establishment of a successful ACI examination program.

4. ACI EXAMINATIONS

The ACI's Certificate and Diploma courses are the most generally recognised professional trading qualifications and are accepted as such by major banks and financial sector institutions around the world. Recent ACI statistics indicate that the association has affiliates in 67 countries and individual members in a further 17 countries. There are about 15,000 members worldwide. While other professional bodies do offer courses covering aspects of foreign exchange and money markets trading, none match the highly specific and dealing focussed ACI approach.

In our interviews with managers and traders in Sri Lanka, there was no indication that any other banking or treasury training program would be seen as a valid alternative to the ACI concept by members of the Sri Lanka trading community. To our best knowledge, the ACI examination program is most comprehensively implemented in Australia, where the Dealing Certificate is required for all entrants into the trading profession. According to ACI's Head of Education, Ms Ann McGoff, the countries most active in education are: Germany, Austria, South Africa, Ireland, Lebanon, Hungary, and the Nordic area. The newly developing foreign exchange market in Slovenia seems to be adopting a similar approach to Sri Lanka, with a major focus on proefessional training under the ACI umbrella.

From recent examination data provided by ACI in Paris, the following countries provided significant proportion of successful Certificate applicants:

- In the Asia region, a total of 34 Certificate passes have been recorded over the past three years, with Singapore accounting for 13
- .In Europe, there have been 1178 passes in this period, with the UK sponsoring 190, Netherlands 93 and Ireland 93.
- In the Americas, numbers are low with the USA generating 26 passes and Canada 8 over the three years.
- The Middle East & Africa region is seeing solid growth with total passes rising from 84 to 240 in the three years. The major contributors are South Africa (113), Saudi Arabia (64) and Lebanon (43). In 2003, Tanzania generated 9 passes.

Currently both Tanzania and Ghana are working on the lines now envisaged for Sri Lanka and training programs are now underway.

The Tanzania example very much reflects the same kind of thinking as is evident I Sri Lanka. In a recent speech inaugurating ACI - Tanzania, Mr. J. P. Mpelembwa, Deputy Director Foreign Markets Division, Bank of Tanzania, said, “The formation of the Tanzania Dealers Association and its affiliation to ACI is a major step in the right direction. It demonstrates the will of individual dealers and their respective financial associations to improve the professionalism in financial markets operations in the country.”

Appendix 4 gives further background detail on ACI and its programs. Appendices 5,6 and 7 reproduce the latest versions of the detailed examination requirements for both the Certificate and the Diploma courses. From these Appendices it is clear that (1) the content of the Certificate program is quite comprehensive and fully meets the current needs of the Sri Lanka market and (2) the Diploma course is technically demanding and covers material at a very sophisticated level.

We would suggest that the Certificate program is ideal for immediate application at all experience levels in Sri Lanka. While the Diploma is valuable as a educational enhancement for potential local course leaders for a domestic Certificate program, it will be offered more sparingly as a professional requirement. Data from the ACI research department indicate that – on a worldwide basis – Certificate entrants outnumber Diploma entrants by a factor of about 4:1

While Appendices 5, 6 and 7 present the essential background to the ACI examinations, below we indicate some of the points of difference between these two programs and assess the relative role of each in the Sri Lanka training project.

THE ACI DEALING CERTIFICATE

ACI defines the professional objective of the Dealing Certificate as follows:

“The goal of level 1 is to provide benchmarks for dealers in the financial markets, foreign exchange and money markets and additionally those providing support to dealers covering what they should learn in the first one to two years of their careers.”

The course content is broadly based and designed to ensure that a trading room employee is capable of handling issues in any area of treasury dealing. The areas covered are:

- Basic Interest Rate Calculations
- Cash Money Markets
- Foreign Exchange
- Forward – Forwards, FRA’s and Money Market Futures and Swaps
- Options
- Principles of Risk
- The Model Code

Again, it is worth emphasizing that the trader population in Sri Lanka is significantly more experienced that that identified as qualifying to sit the Dealing Certificate examination, with the recent course members in Colombo reporting an average of 7.5 years of professional experience.

As confirmed by all of the course attendees, this Certificate is eminently suited to the current needs and aspirations of the Sri Lanka trading community – both foreign exchange and money markets. The relative seniority of the dealing community ensures that the course content is easily absorbed.

The examination structure is reassessed each year and the new syllabus published for upcoming examinations.

THE ACI DIPLOMA

Successful completion of the Dealing Certificate is a necessary precursor to registering for the Diploma which is designed for senior dealers. The content is naturally more advanced than that in the Certificate course and covers the following 6 major areas:

- Foreign Exchange
- Money Markets
- Fixed Income
- Short – Term Interest Rate Derivatives
- Options
- Risk Management
- Fundamental and Technical Analysis

Clearly the content of the Diploma syllabus is significantly more sophisticated than that of the Dealing Certificate and is aimed at senior professionals rather than relative newcomers. As noted earlier, the potential applicant pool for this qualification in Sri Lanka fully meets any experience requirement and from this perspective, Diploma programs could be initiated immediately.

In conclusion, it should also be clearly pointed out that ACI is not simply an examining body but is most visible around the world as a broadly based association furthering the interests of the foreign exchange and related market sectors.

In addition to the topics included in the Dealing Certificate and Diploma courses, it is clear that local managements would welcome specific programs aimed at enhancing local expertise in:

- Back-office and Operations
- Corporate Hedging Strategy and Techniques
- Pre-Certificate Foreign Exchange and Money Markets Introduction

We understand that the CBSL is currently drawing up a TOR for a money markets training project – to cover similar ground to this foreign exchange training assessment.

5. INITIAL TRAINING SESSION IN SRI LANKA

As the recent ACI Training Program established under the auspices of the Sri Lanka Forex Club and financially supported by FIRST, was only completed on March 26, it is too early to report the examination performance of the 21 registered candidates. However, both the program leader – Mr. Mervyn King of JJ Associates – and the participants themselves and very confident of the overall quality of the group. It is expected that the Certificate Examination success rate will be very satisfactory. Appendix 3 lists the Sri Lankan financial institutions who contributed one or more delegates to the course.

Although we had originally planned a pre-course questionnaire, the SLFA elected to nominate course attendees directly. The lack of pre-course screening did not, however, prove to be a problem as the course members proved to be well up to standards of Certificate courses in Europe and elsewhere. To ensure that the views of all course members were incorporated into the research findings, a brief questionnaire was distributed, focussing on views of training needs and potential interest in future training opportunities.

The level of professional experience shown by members of the initial class was far above that normally shown by Certificate applicants who are usually quite inexperienced. By comparison the survey of individuals in the Sri Lanka group indicated an average of 6 years, with some members reporting as much as 17 years. For reference, ACI suggest that Certificate applicants have 0-18 months dealing room experience and only requires 3+ years for the more advanced Diploma course.

It estimated that the total trading community in Sri Lanka numbers about 300 while the President of the Sri Lanka Forex Association – Mr. Ashan Dassanayake, CEO of First Capital Money Brokers – estimates that his association totals about 165 members He also estimates that about 100 of these would be potential participants in ACI training programs. The current program was overfilled and the group size increased to 21 to try to accommodate the high level of interest. Interestingly, the half-page advertisement which the SLFA placed in the Daily Mirror/Financial Times business section led to over 25 phone calls from corporate sector Treasury staff trying to reserve places on any upcoming programs.

Interviews among senior Treasury managers in Colombo suggest that new entrants to foreign exchange careers are about 25 per year. In addition it would appear that the 60 money brokers in Sri Lanka are also interested in taking the ACI examinations as would be such further categories as bank credit personnel and back-office staffs. In addition the corporate sector would be a source of trainees, with an estimated 10 -15 major companies in Sri Lanka now having their own in-house treasury departments.

Potential demand for the Diploma course is more difficult to anticipate although there seems to be solid interest in moving ahead to this significantly more demanding qualification. Comments on the questionnaire completed by attendees of the current course indicate that all but one would wish to take the Diploma in due course.

An overview of these potential candidates suggests that it will not be difficult to fill two Certificate programs each year and one Diploma.

6. CASE STUDIES OF TRAINING ROLE

During the extensive interview program it became clear that there were a number of different motivations behind individual banks' enthusiasm for the adoption of an ongoing ACI program. It is worth identifying three examples of these specific objectives.

1.1. Hatton National Bank

This bank is probably the most sophisticated Treasury provider in Sri Lanka and has a need to train staff to handle both a current and anticipated future need for derivatives activity. Hatton sent 4 delegates to initial Certificate course.

1.2. People's Bank

This state owned institution has a very clear human resources strategy and looks to incorporate ACI training across its entire graduate recruitment base in order to enhance professional staff quality. The bank has 75 graduates in training and plan a further 100 recruits.

1.3. Central Bank of Sri Lanka

The Governor expressed concern over the level of expertise in the foreign exchange market and is using the ACI program to upgrade CBSL's staff in order to help develop the market. CBSL sent two delegates sent to the program.

1.4. Deutsche Bank

Mr. Stefan Mahrdt, Head of Global Banking Division, drew our attention to a job advertisement that his bank had just published that day. Interestingly, the requirements for the Sales Manager – Interest & Currency Management position on offer are demanding and clearly indicate the quality of professional training that is now in demand in Sri Lanka. Specifically, the advertisement requires technical knowledge of foreign exchange, options and interest rate products. The job specification includes several years of treasury sales experience as well as a background with a corporate client base.

Mr. Mahrdt indicated that his bank would be putting emphasis on developing expertise in the areas of, derivatives, corporate foreign exchange hedging advice, financial products, global equities and corporate finance.

In addition to these examples, many other cases could be quoted to confirm that the financial sector sees real value in this effort.

7. Action Plan

We believe that the strong support for an ACI examination program in Sri Lanka clearly indicates that the current training initiative should be seen as the opening phase of a structured implementation plan. With modest financial support from external development agencies, it will be possible to create an ongoing and progressively locally run training program.

Based on our assessment, we believe that there is sufficient capacity within the local forex market professionals to be able to successfully deliver ACI Training after a 3-year phase in period. The content of the Dealing Certificate course is largely traditional foreign exchange and interest rate calculations and analysis. As such, it falls under the scope of the daily work of most treasury departments and raises no real issues of incremental professional development needs for local ACI trainers. The Diploma course does cover more specialized material, but it is pitched at a level which would not be outside the experience of treasury specialists with several years of on-the-job training and exposure to ongoing professional training programmes. As our attendee survey indicated, the members of the initial ACI Dealing Certificate course reported an average of over 7 years of treasury experience – well in excess of the qualifying levels (1-2 years) suggested by ACI. Further, it is already common practice for foreign exchange staffs in Sri Lanka to make regular overseas training trips to India, Singapore, London or New York. Those working at the Sri Lankan subsidiaries of major banks – for example Standard Chartered or Deutsche Bank – are already involved in the international training and major market exposure program of those banks. Further, it was apparent during the interview phase of our project that banks and corporations in Sri Lanka are beginning to utilize more sophisticated financial instruments and that the learning curve is already in place. Although there was some suggestion that local universities or other professional bodies could take responsibility for handling the ACI training programs, the widely expressed local view is that this would tend to diminish the operational and technical focus of the ACI training and could discourage foreign exchange and treasury staffs from participating. Based on our evaluation of the ACI programme, we concur with this view.

In summary terms, we believe the following three-year plan can be implemented:

Year 1 (2004): Initial trading certificate course and examinations should be held in March and October, producing up to 40 graduates. Both programs should be administered on the model of the current course. As courses are carefully tailored to local conditions, we would recommend one firm to carry out both courses. As the recently completed course was well received, the beneficiary may want to consider this in selecting the appropriate firm.

Year 2 (2005): Certificate programs in March and October, with a Diploma course operated in parallel with the March Certificate course.

This combination program would be cost-effective, with Mervyn King confirming he would be interested in handling both courses in a 9-10 day period onsite in Sri Lanka.

From the initial Diploma course, it would be feasible to select a couple of interested experienced and Certificate-qualified local senior foreign exchange personnel to take responsibility for the next certificate course – tentatively scheduled for October 2005.

While the SLFA is prepared to continue to handle administrative arrangements on an ad hoc basis, this could become onerous over time and we believe it will be appropriate to provide modest support for local part-time secretarial services and shared premises.

Year 3 (2006): Two further Certificate courses, entirely administered and taught by Sri Lankan experts.

These courses should be fully self-financing.

Overseas expertise would be required only for additional specialized programs and for a further Diploma courses. The Diploma course could also be partially or fully self-financing and development agency support would be progressively cutback or redirected.

While a number of training companies provide lower cost online options to assist examination candidates, we believe that traditional live tuition courses are the most productive vehicle for training Sri Lanka's trading community.

At the completion of the research trip to Sri Lanka a brief outline of overall findings and conclusions – including pro-forma budgets - was presented to members of the Board of the SLFA. The presentation was well received and the preliminary conclusions accepted. The secretary to the Board, Ms Manohari Gunawardena, has agreed to prepare Minutes of the meeting to record the general consensus and any specific comments.

8. Financial Assessment and Pro Forma Budget

The current program was offered free to participants, supported by a grant from the FIRST initiative.

The following are the key assumptions underlying the training budget:

- Local expenses to cover routine administrative costs and a per capita lunch charge ($1000 per course) levied by the Galadari Hotel.
- Each course timed for 5 days
- The major expense covered by FIRST was the fee to JJ Associates for the services of Mervyn King.
- Local administration s estimated at $1000 per course
- It is estimated that a fully qualified Sri Lankan trainer would charge $1000 per course
- Courses are timed for March and October, with an estimated 20 members per course.

Pro Forma Budget 2004-2006 (US$)

Budget Item	2004	2005	2006
Dealing Certificate	2 courses	2 courses	2 courses
Diploma	NA	1 course	1 course
Certificate Foreign Trainer	20,000	10,000	NA
Certificate Local Trainer	NA	1,000	2,000
Diploma Foreign Trainer	NA	10,000	10,000
Airfares & Subsistence Expenses	6,000	9,000	9,000
Room Fee and Expenses	2,000	3,000	3,000
Local Administration	2,000	3,000	3,000
Total Expenses	30,000	36,000	27,000
External Financing Required	26,000	29,000	19,000
Average Cost per Attendee	750	600	450

For successive years – on the assumption that the Diploma would also be taught by a local trainer – the annual program of two Certificate and one Diploma course would cost $9,000 in total, $150 per attendee. There would be no requirement for external financial support.

The SLFA believes that local institutions would be prepared to pay up to $500 per attendee for each course. Candidates also have to pay an examination fee (Euro 250 for the Dealing Certificate and Euro 350 for the Diploma) but it is usual for the employers to cover this item. The ACI offers bursaries of up to 50% for candidates from emerging markets.

These data were presented to – and welcomed by – the Executive Committee of the FSLA at a meeting on March 30.

The only issue which attracted an alternative view was the timing of the first Diploma course and examination. There was some suggestion that this should take place in October 2004, at the same time as the second planned Certificate program. The Executive Committee's suggestion was that the members of the recent Certificate course were highly motivated to move up to the higher level course at the earliest opportunity and this enthusiasm should be tapped.

While this acceleration seems feasible, it would put a lot of focus on successfully administering a further two programs with only limited experience and would therefore seem somewhat risky. In addition it would bring all the financing forward into the first year of the program.

APPENDICES

Appendix 1: Terms of Reference presented by FIRST Initiative

Appendix 2: List of Individuals Contacted on this Project

Appendix 3: Institutions sending participants to Dealing Certificate Course March 22-26, 2004

Appendix 4: Background on ACI

Appendix 5: Annotated Syllabus for the ACI Dealing Certificate

Appendix 6: Guidance Note for New Syllabus

Appendix 7: Annotated Syllabus for ACI Diploma

APPENDIX 1: TERMS OF REFERENCE PRESENTED BY FIRST INITIATIVE

THE PROJECT

The Project involves two components: (1) the provision of an accredited ACI (see below) training expert to the design and delivery of a training course for the ACI Dealership Certificate; and (2) a training needs assessment/feasibility study and TA project design which will produce an action plan for building local capacity for delivering further training in this area in the future.

TRAINING NEEDS ASSESSMENT AND ACTION PLAN

Whilst the proposed training will meet the immediate needs to provide an ACI Dealing Certificate, this is in fact only one component of the complete ACI training. There is interest in eventually being able to provide the complete ACI Qualification programme, ideally locally. As such, a training needs analysis will be conducted to determine the training needs priority for the forex industry. In addition, the feasibility of developing local capacity to deliver such training in future needs to be assessed.

A. Project Goal and Purpose

The goal of the project is to develop more effective and efficient forex markets in Sri Lanka.

The purpose of the project is to enhance the human resources skills within the forex markets in Sri Lanka.

B. Project Outputs

The main outputs of this project are:

- Successfully qualified forex professionals. Selected dealers will participate in a training programme designed by international experts and will be expected to sit the ACI Dealing Certificate exam at the end of the programme.
- Training needs analysis for forex market professionals.
- Feasibility study and if appropriate action plan to develop sustainable local capacity to deliver forex training.

C. Project Risks

The major risks of this project include:

- Participants may not complete the programme and/or acquire the qualification
- Human capital flight

These risks are mitigated by the SLFA's endeavours to persuade the relevant organisations to employ professionals successful at the examination and also promote the qualification to give the best recognition at the highest level of the management.

D. Terms of Reference for the Consultants

One or two experts with experience in delivering ACI Qualification training and conducting training needs analyses and developing TA projects will be procured to:

1. Deliver Dealership Certificate course:

- Impart the syllabus for an ACI Dealership Certificate course to the candidates via lectures and prepare them for the examination.
- Appointed consultants would need to pitch the delivery to the different categories of candidates such as back office personnel, and risk management personnel whose professional background may be of another discipline.
- The consultant would need to possess the ACI qualification and ideally another managerial discipline which

would help deliver lectures to a diverse audience as stated above.

2. Training needs analysis and action plan

a. Training needs analysis

i. Meet with various stakeholders to determine training needs for different groups of forex market professionals

ii. Consider ACI syllabus in context of training needs vs. other options

iii. Recommend subjects/levels of qualifications for practitioners at different levels

iv. Assess cost implications of proposals and suggest options for meeting costs

b. Feasibility study and action plan

i. Discuss with key stakeholders including industry, IBSL, and the Central Bank view/options for identifying suitable local institutions to host delivery and organisation of course(s) identified in 2(a)

ii. Explore options to enhance attraction, e.g. accreditation by IBSL

iii. Carry out cost/benefit analysis of developing local capacity to deliver ACI courses

iv. If feasibility is established, develop costed action plan, including possible contribution by donors (e.g. FIRST)

v. Agree Action Plan with key stakeholders

APPENDIX 2:
LIST OF INDIVIDUALS CONTACTED ON THIS PROJECT

The list of individuals contacted on this project is as follows:

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7) W A Wijewardena, Deputy Governor CBSL, Chairman Institute of Bankers of Sri Lanka
8) Dr W M Hemachandra, Deputy Superintendent CBSL
9) Y M W B Weerasekera, Director International Operations CBSL
10) Kapila Jayawardena, CEO Citibank Sri Lanka
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12) Dharshan Jayaratne, Foreign Exchange Trader Citibank Sri Lanka.
13) Hemaka Amarasuriya, Chairman Singer Sri Lanka Group
14) Ms Ajitha Perera, Manager ACCA Sri Lanka
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16) N. Vasantha Kumar, Head of Treasury People's Bank
17) Ajith Devasurendra, CEO First Capital Group
18) K G D D Dheerasinghe, Superintendent/Registrar CBSL
19) Stefan Mahrdt, Chief Country Officer and Head of Global Banking Division Deutsche Bank
20) Mano Ratnayake, CEO Vanik Money Brokers
21) Amarananda S. Jayawardena Governor CBSL
22) Asoka de Silva, General Manager People's Bank
23) Premasiri Ratnayake, Chief Manager Hatton National Bank
24) Dupeeda Ratwatte, Chief Manager Treasury Hatton National Bank
25) Sabry Ibrahim, Deputy General Manager Hatton National Bank
26) Anil Amarasuriya, CEO Sampath Bank
27) Ruwan Cooray, Assistant General Manager Treasury Sampath Bank
28) Rohan Perera, Group Treasurer John Keells Holdings Limited
29) Palitha Narangoda, Chief Manager Treasury Commercial Bank
30) Vishnu Mohan, CEO Standard Chartered Bank
31) Ajantha Madurapperuma, CEO Seylan Bank Asset Management Limited
32) Sabry Ibrahim, Deputy General Manager Hatton National Bank

33) SNP Palihena, General Manager Bank of Ceylon
34) Anthony R Barned, CFO Bank of Ceylon
35) Ghazzali Saduk, Dealer Foreign Debt Securities Hatton National Bank
36) Prasantha de Silva, Senior Dealer Foreign Exchange and Money Market Sampath Bank
37) AR Fernandopulle, Asst. Dealer Treasury Division Bank of Ceylon

APPENDIX 3:
INSTITUTIONS SENDING PARTICIPANTS TO DEALING CERTIFICATE COURSE MARCH 22-26, 2004

Commercial Bank

Central Bank of Sri Lanka (2 delegates)

Public Bank Berhad

First Capital Money Brokers Limited

Seylan Bank Asset Management Ltd

Hatton National Bank (4 delegates)

Deutsche Bank

Bank of Ceylon (3 delegates)

Hong Kong Shanghai Banking Corporation (2 delegates)

Sampath Bank (2 delegates)

Seylan Bank (2 delegates)

National Development Bank

APPENDIX 4: BACKGROUND ON ACI

Paris based Association Cambiste Internationale – The Financial Markets Association (ACI) was founded in 1956 with the UK and France as the original members.

ACI-The Financial Markets Association is the largest international professional body for dealers and back office personnel in the wholesale financial markets. ACI provides a suite of specialised examinations targeting Foreign Exchange and Money Markets, Derivatives, Repos, Risk Management etc for both front, middle and back-office staff.

It should be noted that ACI provides an examination service and does not provide training programmes. Training courses for ACI examinations are delivered by third parties.

ACI argues that the wholesale financial markets are a dynamic and fast changing environment and these conditions demand highly qualified people with wide-ranging market skills and knowledge. ACI's education programme sets out the syllabi in three subject areas that test skills, knowledge and the understanding of wholesale financial market products, the market environment and professional behaviour.

ACI's education programme provides a globally acknowledged, portable, professional qualification that enhances career prospects, improves job performance, and sets benchmarks within the industry.

ACI examinations have a modular format and this format assists the learning process and professional development of candidates. This educational process sets out quality standards and provides a clear definition of ethical processes.

ACI communicates with a wide range of national Regulators on the education and training of market participants. ACI also works closely with regulatory bodies in a number of countries to ensure market standards, ACI examinations and regulatory requirements all find common ground.

In recent years a number of countries have explicitly incorporated ACI qualifications as part of a strategy to build up local foreign exchange markets.

The following examples are relevant to the current circumstances in Sri Lanka.

The table below summarises ACI's Certificate examination history for the last three years – allocated by region.

	Asia	Europe	Americas	ME/Africa	Total
2001	19	473	10	84	586
2002	9	347	11	125	492
2003	6	358	14	240	618

Worldwide totals for the Diploma examinations are considerably lower, running from 159 in 2001 to 165 in 2003. Total ACI examination successes in 2003 were 1070, including 40 model code, 127 settlements and 120 for the dealing simulation. In addition, 18 candidates passed the affiliated Wholesale Markets Brokers Association (WMBA) test.

From these data it is clear that most dealers focus on the Certificate syllabus and examinations.

An alternative way to measure the impact of ACI's structured approach to foreign exchange market training and regulation is the progress currently being achieved by the dissemination of the ACI Model Code – which forms an integral part of the Certificate syllabus. According to ACI's UK office, the following trading centers are adopting the Model Code either in part or in its entirety.

Originally derived from a UK model, the code has been fully adopted by: Canada, Australia, Hong Kong, Malaysia, Philippines, Austria, Cyprus, Slovenia, Switzerland and Mauritius.

The code has been partially adopted by: Bermuda, Panama, USA, Singapore, Georgia, Germany, Luxembourg, Malta, Egypt and Lebanon.

In addition, negotiations are underway with a further thirteen countries towards full or partial adoption.

APPENDIX 5:
ANNOTATED SYLLABUS FOR THE ACI DEALING CERTIFICATE

SYLLABUS – THE ACI DEALING CERTIFICATE

Prometric code: 3I0-008

EXAMINATION DELIVERED IN ENGLISH AND GERMAN

Introduction

The ACI Dealing Certificate is a foundation programme that allows candidates to acquire a working knowledge of the structure and operation of the major foreign exchange and money markets, including the ability to apply the fundamental mathematics used in these markets, and their core products (cash, forwards and derivatives), and the basic skills required for competent participation, including the ability to apply the fundamental mathematics used in these markets. Candidates should also be able to apply The Model Code to their situation.

The course is designed for the following groups:

- new entrants and junior dealers (0-18 month's experience) in the dealing room
- middle office and operations personnel
- auditors and compliance officers

The ACI Dealing Certificate is a precursor to the ACI Diploma.

1 Basic Interest Rate Calculations

Overall Objective: To understand the principles of the time value of money. To be able to calculate short-term interest rates and yields, including forward-forward rates, and to use these interest rates and yields to calculate payments and evaluate alternative short-term funding and investment opportunities. Candidates should know what information is plotted in a yield curve, the terminology describing the overall shape of and basic movements in a curve, and the classic theories which seek to explain changes in the shape of a curve. They should also know how to plot a forward curve and understand the relationship between a yield curve and forward curves.

At the end of this section, candidates will be able to:

- calculate present value and future value using the arithmetic techniques of discounting and compounding for both a money market instrument terminated at maturity and one that is rolled over at maturity
- calculate simple interest rates using different day count and annual basis conventions
- identify the day count and annual basis conventions for the euro, sterling, Swiss franc, US dollar and Japanese yen
- fix same-day, next-day, spot and forward value dates, and maturities under the modified following business day convention and end/end rule
- fix the conventional frequency and timing of payments by cash money market instruments, including those with an original term to maturity of more than one year
- calculate broken dates and rates through linear (straight line) interpolation
- define EURIBOR, LIBOR and EONIA
- convert interest rates and yields between the money market basis and bond basis in currencies for which there is a difference

- convert interest rates and yields between annual and semi-annual compounding frequencies
- calculate a forward-forward rate from two mismatched cash rates
- calculate a cash rate from a series of forward-forward rates for consecutive periods
- calculate the value of a discount-paying money market instrument from its discount rate (straight discount) and convert a discount rate directly into a true yield
- plot a yield curve, describe its shape and the basic changes in its shape using market terminology, and outline how the Pure Expectations Theory, Liquidity Preference Theory and Market Segmentation Hypothesis explain the shape of the curve

2 Cash Money Markets

Overall Objective: To understand the function of the money market, the differences and similarities between the major types of cash money market instrument and how they satisfy the requirements of different types of borrower and lender. To know how each type of instrument is quoted, the quotation, value date, maturity and payment conventions that apply and how to perform standard calculations using quoted prices. Given the greater inherent complexity of repo, a good working knowledge is required of its nature and mechanics.

At the end of this section, candidates will be able to:

- define the money market
- describe the main features of the basic types of cash money market instrument --- i.e. interbank deposits, bank bills or bankers' acceptances, treasury or central bank bills, commercial paper, certificates of deposit and repos --- in terms of whether or not they are securitised, transferable or secured; in which form they pay return (i.e. discount, interest or yield); how they are quoted; their method of issuance; minimum and maximum terms; and the typical borrowers/issuers and lenders/investors that use each type
- use generally-accepted terminology to describe the cashflows of each type of instrument
- understand basic dealing terminology as explained in The Model Code
- distinguish between and define what is meant by domestic, foreign and euro- (offshore) money markets, and describe the principal advantages of euromarket money instruments
- describe the differences and similarities of classic repos and sell/buy-backs in terms of their legal, economic and operational characteristics
- define initial margin and margin maintenance
- list and outline the main types of custody arrangements in repo
- calculate the value of each type of instrument using quoted prices, including the secondary market value of transferable instruments
- calculate the present and future cashflows of a repo given the value of the collateral and an agreed initial margin
- define general collateral (GC) and specials
- describe what happens in a repo when income is paid on collateral during the term of the repo, in an event of default and in the event of a failure by one party to deliver collateral

3 Foreign Exchange

Overall Objective: To understand and be able to apply spot exchange rate quotations. To understand basic spot FX dealing terminology and the role of specialist types of intermediary. To recognise the principal risks in spot and forward FX transactions. To calculate and apply forward FX rates, and understand how forward rates are quoted. To understand the relationship between forward rates and interest rates. To be able to describe the mechanics of outright forwards and FX swaps, explain the use of outright forwards in taking currency risk and explain the use of FX swaps in rolling spot positions, hedging outright forwards, creating synthetic foreign currency assets and liabilities, and in covered interest arbitrage. To be able to recognise and use quotes for precious metals, and demonstrate a basic understanding of the structure and operation of the international market in precious metals.

At the end of this section, candidates will be able to:

- identify the base currency and the quoted currency in standard exchange rate notation
- select which currency should be the base currency in any currency pair
- recognise the ISO codes for the currencies of the countries affiliated to ACI - The Financial Markets Association
- distinguish between the “big figures” and the “points/pips”
- apply a bid/offer spot exchange rate as price-maker and price-taker to convert either a base or quoted currency amount
- select the best of several spot rates for the buyer or seller of an amount of base or quoted currency
- understand basic spot FX dealing terminology as explained in The Model Code
- calculate cross-rates from pairs of exchange rates where the common currency is the base currency in both rates, where the common currency is the base currency in only one rate and where the common currency is the base currency in neither rate
- calculate and explain the reciprocal rate of an exchange rate
- define the function of market-making and explain the incentives to make markets and the particular risks of market-making
- outline what a voice-broker does and distinguish voice-brokers from principals
- outline what an automatic trading system (ATS) or electronic broker does in spot FX
- calculate a forward FX rate from a spot FX rate and interest rates
- calculate an outright forward FX rate from a spot rate and the forward points, and vice versa
- explain the relationship between the outright forward rate, the forward points, the spot rate and interest rates, including the concept of interest rate parity, and the possibility and concept of covered interest arbitrage
- fix forward value dates for standard periods and list those periods
- describe the structure and mechanics of an FX outright, and outline how an outright forward can be hedged with a spot transaction and deposits
- describe the structure and mechanics of an FX swap, and outline how it can be used in place of deposits to hedge an FX outright and the advantages
- use generally-accepted terminology to specify an FX swap
- outline the applications of FX swaps in creating synthetic foreign currency asset and liabilities, and in covered interest arbitrage
- outline the application of tom/next and overnight FX swaps in rolling over spot positions and hedging value-tomorrow and value- today outright rates, and calculate a value-tomorrow rate from a spot rate and tom/next points, and a value-today rate from a spot rate, tom/next points and overnight points

- calculate broken-dated forward FX rates through linear interpolation
- calculate forward cross-rates
- list the commodities called precious metals (gold, silver, platinum and palladium) and give their ISO codes
- describe the conventional method of quoting gold in the international market in US dollars per ounce
- apply a bid/offer spot price as price-maker and price-taker to calculate the value of a given weight of precious metals
- distinguish between precious metals trading for physical delivery and book entry
- distinguish between the spot, forward and derivative markets in precious metals
- outline the mechanics and role of the London gold price fixing
- explain the role of gold lending/borrowing and define the gold offered forward rate or lease rate

4 Forward-forwards, FRAs and Money Market Futures & Swaps

Overall Objective: To understand the mechanics of and how to use money market interest rate derivatives to hedge interest rate risk.

At the end of this section, candidates will be able to:

- describe the mechanics and explain the terminology of a forward-forward loan or deposit, and the interest rate risk created by such instruments
- explain how FRAs, money market futures and money market swaps are derivatives of forward-forward positions, and outline the advantages of derivatives
- describe the mechanics and terminology of FRAs, use quoted prices, select the correct contract, decide whether to buy and sell, identify the settlement rate and calculate the settlement amount
- explain how FRAs can be used to hedge interest rate risk
- describe the mechanics and terminology of money market futures, use quoted prices, select the correct contract, decide whether to buy and sell, identify the settlement rate and calculate variation margin payments
- explain how money market futures can be used to hedge interest rate risk
- give the contract specifications of the eurodollar, 3-month Euribor, short sterling, euro-Swiss franc and Japanese euroyen futures
- outline the principal differences between OTC instruments like FRAs and exchange-traded instruments like futures, and describe how a futures exchange and clearing house works
- describe the mechanics and terminology of money market interest rate swaps, including overnight indexed swaps (OIS), use quoted prices, select the correct contract, decide whether to buy and sell, identify the settlement rate and calculate settlement amounts
- - explain how swaps can be used to hedge interest rate risk
- - explain how money market futures can be used to hedge and price FRAs and money market swaps
- - identify the overnight indexes (OI) for euro, sterling, Swiss francs and US dollars.

5 Options

Overall Objective: To understand the fundamentals of options. To recognise the principal classes and types, and understand the terminology, how they are quoted in the market, how their value changes with the price of the underlying asset and the other principal factors determining the premium, how the risk on an option is measured and how they are delta hedged. To recognise basic option strategies and understand their purpose.

At the end of this section, candidates will be able to:

- define an option, and compare and contrast options with other instruments
- define strike price, market price, the underlying, premium and expiry
- calculate the cash value of a premium quote
- describe how OTC and exchange-traded options are quoted, and when a premium is conventionally paid
- define call and put options
- explain the terminology for specifying a currency option
- describe the pay-out profiles of long and short positions in call and put options
- describe the exercise rights attached to European, American, Bermudan and Asian (average rate) styles of option
- define the intrinsic and time values of an option, and identify the main determinants of an option premium
- explain what is meant by in the money, out of the money or at the money
- define the delta, gamma, theta, rho and vega
- interpret a delta number
- outline what is meant by delta hedging
- outline how to construct long and short straddles and strangles, and explain their purpose
- outline how options can be used to synthesise a position in the underlying asset
- define an interest rate guarantee
- describe the function of cap and floor options, and how they are used to produce long and short collars

6 Principles of Risk

Overall Objective: To identify and distinguish between the principal types of risk in the markets, and to explain the main policies and procedures used to mitigate these risks. To understand the principles of position-keeping and valuation, using spot FX as an example.

At the end of this section, candidates will be able to:

- define and distinguish between credit, market, liquidity, operational, legal, settlement and basis risks, and identify these risks in basic money market instruments
- define and distinguish between transaction, translation and economic currency exposures
- define replacement cost
- explain the purpose of netting, and distinguish between bilateral and multilateral netting
- define settlement risk in FX and outline how this is managed through the Continuous Linked Settlement (CLS)

system

- describe how the credit risk on spot and forward FX instruments changes over time
- explain which risks are hedged by collateral and which risks are introduced
- calculate the position and average rate of a series of spot FX transactions, and the profit or loss for a given revaluation rate
- explain the purpose of documentation
- explain the purpose of risk capital
- define nostro and vostro accounts, and outline their function
- explain what is meant by reconciliation
- distinguish between overnight and daylight limits
- distinguish between position, loss and risk (VaR-type) limits
- distinguish between hedging and arbitrage
- explain what is meant by long and short positions, how short positions are created and the risk on a short position

7 The Model Code

The Model Code is a valuable guide to best conduct and international best practice for all market participants. It is a practical study of over-the-counter market practices and conventions, distilled from the core best practices in the foreign exchange, money market and related derivative markets and is an integral part of the ACI suite of examinations.

Overall Objective: For candidates to have a thorough knowledge of the provisions of the Model Code and market practices, with particular emphasis on high standards of integrity, conduct and professionalism as well as the monitor and control mechanisms to be introduced to protect individuals and their institutions from undue risks and resultant losses.

Candidates will be expected to demonstrate an in depth knowledge and understanding of each of the following.

- the purpose of the Model Code, and its application within the industry
- managements' responsibilities with regards to monitor and control policies that must, could and should be considered to be introduced into their own institutions to ensure full compliance with the letter and spirit of the Model Code
- the roles and responsibilities of the back office and their relationship to the front office
- undesirable practices and unprofessional conduct issues highlighted in the Model Code
- market terminology
- the general risk management principles for dealing business
- the procedures for dispute resolution, mediation and expert determination
- the market practices covering dealings in
  - Foreign exchange
  - Money market

- Derivatives
- Dealer-broker relationships
- Dealer-customer relationships

At the end of this section, candidates will be able to:

- explain the purpose of The Model Code and its application within the industry
- describe the scope of The Model Code
- identify the role of the ACI’s Committee for Professionalism as the author of The Model Code
- demonstrate a working knowledge of The Model Code by selecting the recommended responses to given issues as well as recognising what are appropriate standards of personal conduct in various circumstances, recommended dealing practice, the proper conduct and management of relationships with corporate/commercial clients and brokers, general risk management principles for dealing business and specific recommendations for the prudent organisation and management of such business
- explain standard market terminology
- explain the procedures for disputes, differences, mediation and compliance with The Model Code

APPENDIX 6: GUIDANCE NOTE FOR NEW SYLLABUS

February 2004

THE ACI DEALING CERTIFICATE – NEW SYLLABUS 2004

GUIDANCE NOTE

The Dealing Certificate syllabus has been rewritten in order to provide an up to date and comprehensive coverage of the FX and money markets, and greater clarity to candidates on what will be examined. The new bullet points are quite precise. For example, they indicate clearly which topics might appear as calculation questions and which currencies are covered.

The restructuring of the syllabus has included the deletion of the Background section, which was considered too general in scope to be practically useful to candidates in their early careers and difficult to examine effectively. Risk Environment, Position Keeping and the Role of Settlements have been deleted but many of the topics have been absorbed into the new section on the Principles of Risk in order to provide a better balance within the Certificate. The section on Repo has been absorbed into Money Markets, not because it lacked importance, but because it belongs there. The two sections on FX have been merged. The section on derivatives has been split into two, with options as one of the new sections, in order to reflect the importance of these instruments in modern markets.

One addition to the syllabus is precious metals, which is included in the FX section. Only outline knowledge of this area is required.

The pool of questions used in the Dealing Certificate examination has been revised to accurately reflect the new syllabus and, as far as practicable, to remove ambiguities in individual questions.

All questions are multiple-choice with four alternative answers. Sample questions have been provided, but only to illustrate the style of the examination.

Although it is more precise, the new syllabus still allows some latitude to the examiner in setting questions. However, candidates can be assured that the examiner will not use this latitude to test trivial or obscure facts. The examiner will be very conscious that the Dealing Certificate is a foundation qualification aimed primarily at new entrants and junior dealers, and is focused on major markets, core products and basic skills. Among other things, this means that the focus is on international and cross-border markets.

Candidates should note that they will be expected to be able to select, as appropriate, the bid or offer from spot FX and interest rate quotes, but will not be expected to derive bids and offers in calculations (e.g. forward foreign exchange rates).

Candidates should note that no knowledge of bond calculations is required on questions on repos. The value of bonds used as collateral will be given. However, candidates should have some idea of the nature of bonds and how they are described.

January 2004

APPENDIX 7:
ANNOTATED SYLLABUS FOR ACI DIPLOMA

SYLLABUS – THE ACI DIPLOMA

Prometric code: 3I0-006

EXAMINATION DELIVERED IN ENGLISH AND GERMAN

Introduction

The ACI Diploma builds on the ACI Dealing Certificate to ensure that candidates have a good practical knowledge of the foreign exchange and money markets, of the linkages that exist between the different markets and of the concepts used in managing the risks in these markets. Candidates will be expected to have acquired a solid grounding in money market arithmetic and the core products before taking the Diploma.

The course is designed for senior dealers.

In order to be eligible to take the ACI Diploma examination, candidates must have passed the ACI Dealing Certificate examination.

1 Foreign Exchange

Overall Objective: To display a broad range of practical knowledge by showing how to apply FX swaps in exploiting covered interest arbitrage opportunities and managing spot and forward FX positions, how to apply forward-forward FX swaps in managing interest rate risk, and how to value forward FX positions. To be able to define an NDF and explain the rationale behind them. They should also be able to price time options.

At the end of this section, candidates will be able to:

- explain the convention for fixing the spot rate in FX swaps, and describe the cost or benefit of different choices to the counterparties
- analyse the impact of a change in the spot rate on an FX swap
- describe how interest is managed in matched-principal FX swaps
- calculate the cost of borrowing or lending through FX swaps and identify covered interest arbitrage opportunities
- calculate the profit or loss when rolling over a spot FX position with tom/next FX swaps and identify the risks involved
- roll-over a forward FX position at a historic rate
- extend or reduce the term of an outright forward FX using FX swaps
- price a time option from outright forward rates
- forward-forward FX swaps and the strategies underlying their use
- outline the construction of synthetic FRAs using forward-forward FX swaps
- define an NDF and explain the rationale behind them
- calculate the profit or loss on a spot FX position on T+1 for given revaluation rates
- calculate the profit or loss on an FX swap position for given revaluation rates

- calculate the profit or loss on an outright forward FX position for given revaluation rates

2 Money Markets

Overal***l Objective:*** To be able to compare and contrast the main types of cash instruments in the money market and explain their relative value. To display a good working knowledge of repo.

At the end of this section, candidates will be able to:

- describe the principal comparative advantages and disadvantages of each of the main types of cash money market instruments for typical borrowers/issuers and lenders/investors
- explain the benefits of the programmed issuance of money market securities
- describe the typical spreads between the yields on the different types of instruments and explain the principal reasons for these spreads
- distinguish the credit ratings used by the main agencies for short-term instruments from longer-term ratings
- describe the precise specifications of the overnight indexes (OI) for euro, sterling, Swiss francs and US dollars
- explain the main reasons why initial margin is taken in repo, define margin threshold and minimum transfer amount, and calculate the start proceeds of a repo using the concept of the Margin Ratio in ISMA repo documentation
- calculate the margin call on a repo
- describe the early termination method used in sell/buy-backs as an alternative to margining
- explain why counterparty risk is the primary concern in repo and the risks introduced by the use of collateral
- describe the working of tri-party repo
- explain how rights of substitution work in repo
- explain the main reasons why collateral goes on special and identify GC from the ISMA list
- define the precise specifications for the Eurepo index
- calculate the forward price of a sell/buy-back and recognise this as the forward price of the collateral
- list the standard forms of documentation for cross-border transactions in cash money market instruments in Europe

3 Fixed Income

Overall Objective: To place the bond markets in perspective by understanding what distinguishes fixed-income instruments as tools of financing and investment from money market, equity and credit (loan) instruments. To be able to use bonds by understanding how a fixed-income instrument works, how it is quoted, how to calculate its fair value and how to measure the interest rate risk. Candidates should be able to use yield-to-maturity, par yields and zero coupon yields in calculating the fair value of a fixed-income instrument, and know when to use each type of yield and how to calculate one type of yield from another. The basic focus is on domestic government bonds, but candidates are expected to differentiate a eurobond and understand why non-government bonds have credit spreads and how this affects the price behaviour of these bonds.

At the end of this section, candidates will be able to:

- distinguish capital markets from money markets, and debt capital markets from equity and credit (loan) capital markets, as a source of financing, a home for investment and a tool for trading

- distinguish domestic, foreign and eurobond markets
- explain the importance of government bond markets
- explain the impact of credit risk on bond prices
- understand bond quotations in both price and yield terms, including clean and dirty prices, and calculate the accrued interest and dirty price of a bond
- identify the day count, annual basis and compounding frequency conventions that apply to bond markets in major currencies, and be able to convert between these bond conventions, and between bond and money market conventions
- understand bond quotes against benchmark yields, swaps and on an asset-swap basis
- calculate the fair value of plain vanilla and zero-coupon bonds from yield-to-maturity
- explain the relationships between price, coupon and yield on fixed-income instruments
- explain the interest rate risk profile of fixed rate bonds and measure this risk on a plain vanilla bond by calculating its duration (on a coupon date)
- distinguish zero-coupon, par and yield-to-maturity yields, and explain the shortcomings of yield-to-maturity as a measure of the rate of return and the assumptions underlying its use in bond quotations
- calculate a zero-coupon yield from a series of yields-to-maturity using the “bootstrapping” method and calculate a par yield from yield-to-maturity

4 Short-term interest rate derivatives

Overall Objective: To explain the pricing and application of FRAs, money market futures and money market swaps in hedging, risk-taking and arbitrage, in particular, between each other, and the use of these instruments as a source of trading information.

At the end of this section, candidates will be able to:

- plot a forward curve and explain the relationship between forward curves and the contemporaneous yield curve
- calculate the bid or offer price of an FRA from deposit rates or a futures strip
- calculate the exact cost of borrowing or lending that is hedged with an FRA
- define the three types of basis between money market futures prices and the underlying cash rates
- explain how to compensate for the basis using the concept of convergence
- define IMM FRAs and swaps
- explain how to use a strip of futures to price non-IMM periods
- define the hedge ratio
- outline the structure and purpose of strip and stack hedges
- outline the structure and purpose of calendar spreads
- define and explain the usefulness of the volume and open interest statistics on a futures contract
- identify arbitrage opportunities between FRAs, money market futures and money market swaps
- describe the applications of OIS in risk-taking, hedging and arbitrage

- describe how OIS can be used to reduce credit risk
- describe the advantages of OIS over traditional term swaps for risk management
- outline the problem of the convexity bias between futures and OTC derivatives like FRAs and swaps

5 Options

Overall Objective: To understand the principles underlying basic option pricing theories, explain the applications of options and describe option trading strategies.

At the end of this section, candidates will be able to:

- outline the logic underlying the Black-Scholes theory, including the binomial theorem, and list the weaknesses of the theory
- name some of the alternative common pricing models available for major underlying asset classes
- define volatility as it is commonly understood in the context of options (i.e. standard deviation) and distinguish between historic and implied volatility
- calculate the standard deviation of returns
- convert volatility between an annualised basis and higher frequencies
- calculate the break-even price of an option
- identify the value of the underlying from the prices quoted for puts and calls at different strike prices
- identify the intrinsic value of an option from the prices quoted for puts and calls at different strike prices
- explain the skew of implied volatility
- define put/call parity, and use it to construct synthetic cash, forward and options positions
- explain delta and gamma hedging, and calculate delta hedges for plain vanilla options
- explain the interaction of gamma and theta over the life of an option
- describe the relative delta and gamma of in-the-money, out-of-the-money and at-the-money options
- estimate the net delta and vega of a simple options portfolio
- explain how changes in the spot or forward price of the underlying, the time to expiry of an option, interest rates and volatility impact on the value of an option
- explain the structure and purpose of bull and bear call and put spreads, and risk reversals
- describe the structure and purpose of exotic options such as knock-out and knock-in, range binary, touch, digital and compound options

6 Risk Management

Overall Objective: To describe how risk management is generally organised in a bank and the role of the main functions. To describe the role of risk capital and the structure of international capital adequacy requirements. To extend the understanding of the principal methods of risk measurement that are covered elsewhere in the syllabus and in the ACI Dealing Certificate to include the concept of value-at-risk (VaR). To deepen the understanding of risk mitigation by means of netting positions by comparing the alternative netting methods.

At the end of this section, candidates will be able to:

- describe the exclusive roles of front office, middle office (risk management function) and back office, and explain the need for the segregation of their duties
- describe the role of the ALCO
- describe the role of the credit committee
- describe the role of audit
- define risk capital, explain its role in covering unexpected losses, distinguish between economic and regulatory risk capital, and outline how capital is raised and re-invested
- explain the purpose of the Basle Accords
- explain the reason for the Market Risk Amendment to the 1988 Basle Accord
- calculate capital requirements for spot and forward foreign exchange, cash money market instruments, FRAs, and money market futures and swaps transacted with OECD central governments, OECD banks and corporates under the 1988 Basle Accord
- outline the architecture of the New Basle Accord
- explain the purpose of the EU Capital Adequacy Directive (CAD)
- define value-at-risk (VaR)
- explain the key assumptions in a VaR calculation (holding period, observation period and confidence interval)
- explain the key assumptions underlying VaR (randomness, linearity and normal market conditions)
- calculate the VaR of a single future cash flow
- distinguish between undiversified and diversified VaR
- distinguish between payment netting, netting by novation and close-out & set-off
- explain the working of a central clearing counterparty (CCP)

7 Fundamental and technical analysis

Overall Objective: To understand how the foreign exchange and money markets operate within constraints set by the international and domestic policies of governments, and generally implemented by central banks. To be able to use standard fundamental and technical indicators to assess the forces driving exchange rates and interest rates.

At the end of this section, candidates will be able to:

- outline the roles of the IMF, the BIS and the OECD
- distinguish between fixed and floating rate regimes, recognise the graduated nature of floating regimes, and explain the basic economic rationale for each type of regime
- distinguish between sterilised and unsterilised currency intervention
- explain why central banks intervene in their domestic money markets, and list the ultimate and intermediate targets of monetary policy for the ECB, Federal Reserve, Bank of England and Swiss National Bank
- outline the main factors affecting money market liquidity
- list the main tools of central bank money market intervention
- explain the purpose of reserve requirements

- explain the purpose of exchange controls
- distinguish between fundamental and technical analysis
- outline the main items in the balance of payments
- outline the main items in the national accounts
- identify the economic and financial indicators that are proxies for the main items in the national accounts and explain the connection
- outline the principal methods of technical analysis, including charting, moving averages, relative strength and momentum indicators, oscillators, Fibonacci numbers, Elliott Waves and Gann Analysis